CCD Color Cameras

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LTC 0435 Series Color Cameras

The LTC 0435 series are compact rugged, 1/3-inch image format digital color CCD cameras. Their superior sensitivity and resolution provide optimal performance in virtually all environments.

Easy Installation, digital signal processing, on screen displays, superior picture quality and reliability brings the video performance of standard resolution color cameras to a level never reached before and makes the LTC 0435 series the best choice for first time and professional users.

This fully automatic camera is ready to work for you, and is easy to install in even the most demanding applications. On- screen Displays (OSD) provide quick and easy access to all camera features.

The LTC 0435 cameras also comes with a lens wizard that automatically detects the type of lens installed and provides an OSD guide that allows the installer to easily adjust the lens level and focus without special tools or filters.
The automatic black level feature, now introduced in color cameras, enhances contrast by removing veiling glare from the picture.

The wide range of through the lens automatic sensing tracking white balance provides true to life color images for indoor and outdoor applications.
The ability to operate on AC or DC provides added flexibility to system designs and reduces the amount of training and support items to keep on-hand.

Features

- 1/3- inch format CCD imager
- High sensitivity
- Advanced digital signal
- Processing
- Standard resolution
- Auto detection of lens type
- Easy to install
- Accepts AC or DC voltages

Functions

Bilinx Technology The LTC 0435 series cameras incorporate Bilinx. Bilinx is a bi-directional communication capability embedded in the video signal of all Bosch Dinion cameras. With Bilinx technicians can check status, change camera settings and even update firmware from virtually anywhere along the video cable. Bilinx reduces service and installation time, provides for more accurate set-up and adjustment, and improves overall performance. In addition, Bilinx uses the standard video cable to transmit alarm and status messages, providing superior performance without additional installation steps.

Parts Included

Qty	Components
1	LTC 0435 Series Color Camera

Certifications and Approvals

Electromagnetic compatibility:	
EMC immunity:	According EN50130-4
EMC emission:	According EN505022 class B According FCC, class B part 15

Safety:
LTC 0435/10 and LTC 0435/50: EN60065
LTC 0435/20 and LTC 0435/60: UL6500

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Technical Specifications

Electrical

Model No.	Rated Voltage	Voltage Range	System
LTC 0435/10	12 VDC 24 VAC 50 Hz	10.8-39 VDC 12-28 VAC 45-65 Hz	PAL
LTC 0435/20	12 VDC 24 VAC 60 Hz	10.8-39 VDC 12-28 VAC 45-65 Hz	NTSC
LTC 0435/50	230 VAC 50Hz	85-265 VAC 45-65 Hz	PAL
LTC 0435/60	120 VAC 60Hz	85-265 VAC 45-65 Hz	NTSC

Power Consumption	4 W, excluding lens.
Imager	Interline transfer CCD, 1/3-inch image format
Active Picture Elements	
	PAL Models: 500 H x 582 V
	NTSCModels: 510 H x 494 V
Sensitivity (3200 k)	

	Usable Picture (50 IRE)	Full Video
Scene illumination[1)]	0.39 lux (0.039 fc)	1.6 lux (0.16 fc)
Imager illumination	0.06 lux (0.006 fc)	0.24 lux (0.024 fc)

1) F/1.2, 89% reflection, SenseUp off

Horizontal Resolution	330 TVL
Signal-to-noise Ratio	50 dB
AGC	21 dB (max)
Electronic Shutter	Automatic, 1/50 to 1/125000 sec. (CCIR), 1/60 to 1/150000 sec. (EIA)
Aperture Correction:	Horizontal & vertical symmetrical
Backlight Compensation	Center window weighting
White Balance	Automatic sensing (2500-9000 K)
Video Output	Composite video 1.0 Vpp, 75 ohm

Synchronization

Line-Lock

(When powered by AC only) Synchronizes the camera to the power line zero crossing for roll-free vertical interval switching. Vertical phase delay can be adjusted (0 - 358 degrees) to allow vertical synchronization in multi-phase power installations Free Running (When DC-supply or L/L off): Internal crystal reference is standard on all models.

Controls

- Video level.
- Shutter: AES / Off / Flickerless
- AGC: On / Off
- BLC: On / Off
- Auto ATW: On / Hold Black: On / Off
- R-offset
- B-offset
- Vphase Adjustment: 0 - 358 degrees

Mechanical

Connectors	- Video Output	BNC
	- Video/DC-iris connector	4-pin EIA-J
Power	LTC 0435/10 and LTC 0435/20: push type connectors, polarity independent, isolated from video output terminals	
	LTC 0435/50: 2-wire power cord with Euro plug	
	LTC 0435/60: 2-wire power cord with polarized plug	
Camera mounting	Top and Bottom, 1/4-inch 20 UNC.	
Lens mounting	C and CS.	
Dimensions (H x W x D) including connectors	58 x 66 x 122 mm (2.28 x 2.6 x 4.8 inch).	
Weight	0.45 kg (0.99 lb).	

Environmental

Operating Temperature	-20°C to 50°C (-4°F to 122°F).
Storage Temperature	-25°C to 70°C (-13°F to 158°F).
Operating Humidity	5% to 93% non-condensing.

Ordering Information

Model & Description

LTC 0435/10 Color Camera
1/3-inch Color camera PAL, low voltage

LTC 0435/20 Color Camera
1/3-inch Color camera NTSC, low voltage

LTC 0435/50 Color Camera
1/3-inch Color camera PAL, high voltage

LTC 0435/60 Color Camera
1/3-inch Color camera NTSC, high voltage

Hardware Accessories

LTC 3364/40 Varifocal Lens
1/3-inch, 2.8 – 12 mm, DC-iris, CS-mount, F/1.4 - 360, 4 pin

LTC 3374/20 Varifocal Lens
1/3-inch, 5 – 50 mm, DC-iris, CS-mount, F/1.4-185, 4-pin

TC120PS Power Transformer
Power Supply Unit (120 VAC, 60 Hz/15 VDC, 9 VA)

TC220PS Power Transformer
Power Supply Unit (220 - 240 VAC, 50/60 Hz/15 VDC, 9 VA)

TC220PSX-24 Power Transformer
Power Supply Unit (220 –240 VAC, 50/60 Hz/24 VAC, 20 VA)

TC1334 Power Transformer
Power Supply Unit (120 VAC, 60 Hz/24 VAC, 30 VA)

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LTC 0455 Series Color Cameras - 540 TVL

The LTC 0455 series are compact rugged, 1/3-inch image format digital color CCD cameras. Their superior sensitivity, 540 TVL resolution and picture quality provide optimal performance in virtually all situations. Easy Installation, digital signal processing, on screen displays, superior picture quality and reliability, brings the video performance of high resolution color cameras to a level never reached before and makes the LTC 0455 series the best choice for first time and professional users.

This fully automatic camera is ready to work for you, and is easy to install in even the most demanding applications. On-screen Displays (OSD) provide quick and easy access to all camera features. The LTC 0455 cameras also comes with a lens wizard that automatically detects the type of lens installed and provides an OSD guide that allows the installer to easily adjust the lens level and focus without special tools or filters.

The automatic black level feature, now introduced in color cameras, enhances contrast by removing veiling glare from the picture. NightSense is used to further extend the excellent sensitivity by a factor 3 in monochrome operation. This mode can be automatically activated under low light situations.

Automatic sensing for tracking white balance, provides true to life color images in indoor and outdoor applications.

The ability to operate on AC or DC provides added flexibility to system designs and reduces the amount of training and support items to keep on-hand.

Features

- 1/3-inch format CCD imager
- High sensitivity
- Advanced digital signal processing
- 540 TVL resolution with outstanding picture quality
- Extended sensitivity with nightsense
- Auto detection of lens type with lens wizard
- Easy to install
- Accepts AC or DC voltages

Functions

Bilinx Technology

The LTC 0455 series cameras incorporate Bilinx. Bilinx is a bi-directional communication capability embedded in the video signal of all Bosch Dinion cameras. With Bilinx technicians can check status, change camera settings and even update firmware from virtually anywhere along the video cable. Bilinx reduces service and installation time, provides for more accurate set-up and adjustment, and improves overall performance. In addition, Bilinx uses the standard video cable to transmit alarm and status messages, providing superior performance without additional installation steps.

Parts Included

Qty	Components
1	LTC 0455 Series Color Camera

Certifications and Approvals

Electromagnetic compatibility:	
EMC immunity:	According EN50130-4
EMC emission:	According EN505022 class B, According FCC, class B part 15

Safety:
LTC 0455/10 and LTC 0455/50: EN60065
LTC 0455/20 and LTC 0455/60: UL6500

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Technical Specifications

Electrical

Model No.	Rated Voltage	Voltage Range	System
LTC 0455/11	12 VDC 24 VAC 50 Hz	10.8-39 VDC 12-28 VAC 45-65 Hz	PAL
LTC 0455/21	12 VDC 24 VAC 60 Hz	10.8-39 VDC 12-28 VAC 45-65 Hz	NTSC
LTC 0455/51	230 VAC 50Hz	85-265 VAC 45-65 Hz	PAL
LTC 0455/61	120 VAC 60Hz	85-265 VAC 45-65 Hz	NTSC

Power Consumption	4 W, excluding lens.
Imager	Interline transfer CCD, 1/3-inch image format.
Active Picture Elements	
PAL Models	752 H x 582 V.
NTSC Models	768 H x 494 V.

Sensitivity (3200 k)

		Usable Picture (30 IRE)	Usable Picture (50 IRE)	Full Video
Scene illumination1)	fc	0.03	0.07	0.26
(color mode)	lx	0.30	0.65	2.6
Imager illumination	fc	0.005	0.010	0.040
(color mode)	lx	0.045	0.10	0.40
Scene illumination1)	fc	0.012	0.026	0.104
(night mode)	lx	0.12	0.26	1.04
Imager illumination	fc	0.002	0.004	0.016
(night mode)	lx	0.018	0.040	0.16

1) for f/1.2 lens, 89% scene reflectance.

Horizontal Resolution	540 TVL
Signal-to-noise Ratio	50 dB
AGC	21 dB, (max)
Electronic Shutter	Automatic, 1/50 to 1/125000 sec. (CCIR), 1/60 to 1/150000 sec. (EIA)
Aperture Correction	Horizontal and vertical, symmetrical
Backlight Compensation	Center window weighting
White Balance	Automatic sensing (2500 - 9000 K).
Video Output	Composite video 1.0 Vpp, 75 Ohm

Synchronization

Line-Lock

(When powered by AC only) Synchronizes the camera to the power line zero crossing for roll-free vertical interval switching. Vertical phase delay can be adjusted (0 - 358 degrees) to allow vertical synchronization in multi-phase power installations. Free Running (When DC-supply or L/L off): Internal crystal reference is standard on all models.

Controls

- Video level
- Shutter: AES / Off / Flickerless
- AGC: On / Off
- BLC: On / Off
- Auto Black: On / Off
- NightSense On / Auto / Forced
- ATW: On / Hold
- R-offset, B-offset
- Vphase Adjustment: 0 – 358 degrees

Mechanical

Connectors	- Video Output	BNC
	- Video/DC-IRIS connector	4-pin EIA-J
Power	LTC 0455/10 and LTC 0455/20 push type connectors, polarity independent, isolated from video output terminals	
	LTC 0455/50: 2-wire power cord with Euro plug	
	LTC 0455/60: 2-wire power cord with polarized plug	
Camera mounting	Top and Bottom, 1/4-inch 20 UNC.	
Lens mounting	C and CS.	
Dimensions (H x W x D) including connectors	58 x 66 x 122 mm (2.28 x 2.6 x 4.8 inch).	
Weight	0.45 kg (0.99 lb).	

Environmental

Operating Temperature	-20°C to 50°C (-4°F to 122°F).
Storage Temperature	-25°C to 70°C (-13°F to 158°F).
Operating Humidity	5% to 93% non-condensing.

Ordering Information

Model & Description

LTC 0455/11 Color Camera
1/3-inch Color camera PAL, hr, low voltage, 540 TVL

LTC 0455/21 Color Camera
1/3-inch Color camera NTSC, hr, low voltage, 540 TVL

LTC 0455/51 Color Camera
1/3-inch Color camera PAL, hr, high voltage, 540 TVL

LTC 0455/61 Color Camera
1/3-inch Color camera NTSC, hr, high voltage, 540 TVL

Hardware Accessories

LTC 3364/40 Varifocal Lens
1/3-inch, 2.8 – 12 mm, DC-iris, CS-mount, F/1.4 - 360, 4 pin

LTC 3374/20 Varifocal Lens
1/3-inch, 5 – 50 mm, DC-iris, CS-mount, F/1.4-185, 4-pin

TC120PS Power Transformer
Power Supply Unit (120 VAC, 60 Hz/15 VDC, 9 VA)

TC220PS Power Transformer
Power Supply Unit (220 - 240 VAC, 50/60 Hz/15 VDC, 9 VA)

TC220PSX-24 Power Transformer
Power Supply Unit (220 –240 VAC, 50/60 Hz/24 VAC, 20 VA)

TC1334 Power Transformer
Power Supply Unit (120 VAC, 60 Hz/24 VAC, 30 VA)

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LTC 0485 Series Dinion^{XF} Color Cameras - 540 TVL

The LTC 0485 Series of High Performance 1/3-inch Digital CCD Color Cameras create the best possible image, even under the most difficult light and scene conditions. Based on unique 15-bit digital video processing technology and employing XF-Dynamic, these cameras provide excellent sensitivity with extended dynamic range. By employing the best 1/3-inch CCD available, advanced front end processing, combined with the outstanding Dinion DSP, the cameras achieve an astonishing sensitivity, providing better color images in low light situations and sharper daytime images. Intelligent White balance algorithms, supported by a White Balance Hold function and even full manual white balance, ensure the most accurate color reproduction possible. All Dinion cameras are supplied ready to operate. Simply attach and focus the lens, and connect power to provide optimal pictures under virtually all scene conditions. No tools are required for back focus and power connection.
For extra challenging situations where fine tuning or special settings are required, the camera parameters can be individually set using the control buttons on the side of the camera and On-screen Display (OSD). Also, to aid installation, the camera automatically detects the lens type, and using the Lens Wizard ensures accurate (back) focusing for perfectly sharp pictures at all times

Features

- 15-bit DSP technology
- XF-dynamic
- Bilinx communication
- NightSense
- Default shutter
- Lens wizard
- Auto black
- Video motion detection
- 540 TVL resolution

Functions

XF-Dynamic

Extended dynamic range is brought to a new level on the LTC 0485 Series Camera by XF-Dynamic technology. XF-Dynamic automatically processes the highly accurate 15-bit digital signal to optimally capture the detail in both the highlight and lowlight areas of the scene simultaneously, to maximize the information visible in the picture.

Bilinx Technology

The LTC 0485 series cameras incorporate Bilinx. Bilinx is a bi-directional communication capability embedded in the video signal of all Bosch Dinion cameras. With Bilinx technicians can check status, change camera settings and even update firmware from virtually anywhere along the video cable. Bilinx reduces service and installation time, provides for more accurate set-up and adjustment, and improves overall performance. In addition, Bilinx uses the standard video cable to transmit alarm and status messages, providing superior performance without additional installation steps.

Video Motion Detection

The built-in video motion detector allows you to select up to four fully programmable areas with individual thresholds. The global scene change detector minimizes false alarms caused by sudden lighting condition changes, such as switching on or off the indoor or security lighting. When motion is detected alarms may be displayed in the video signal, the output relay can be closed in addition to alarm message transmission on Bilinx.

Auto Black

The automatic black level feature, enhances contrast by removing veiling glare from the picture or when contrast is reduced by fog or mist.

Default Shutter

When viewing moving objects a fast shutter speed is required. When using a fast shutter speed the lens opening or gain control needs to be increased to maintain the video signal.
The camera sensitivity is limited by the fast shutter speed.
The default shutter setting of the LTC 0485 offers the best of all worlds, fast shutter speed as long as there is sufficient light, however as the light level falls, when other adjustments have been exhausted, the shutter reverts to the standard setting maintaining the cameras excellent sensitivity.

Back Light Compensation (BLC)

Offering a fully programmable BLC area of interest, and a variable BLC level, the camera can be easily set up for even the most challenging entrance applications.

Lens Wizard

The LTC 0485 series automatically detects the type of lens installed. The Lens Wizard will focus the lens at the maximum lens opening, to ensure that focus is maintained throughout the entire 24-hour day/night cycle. No special tools or filters are required.

Programmable Modes

The camera supports three independent operating modes. The 3 modes are preprogrammed for typical applications, but are fully programmable for individual situations. Switching between modes is easy via Bilinx or the external alarm input.

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NightSense

The LTC 0485 cameras feature NightSense. With NightSense the sensitivity is increased by 9 dB in monochrome mode. NighSense can be automatically activated in low light situations, or remotely using Bilinx.

SensUp

By increasing the integration time on the CCD up to 10 times, the effective sensitivity is dramatically enhanced, especially useful where there is no artificial lighting and you rely on the moon, stars and scattered radiation.

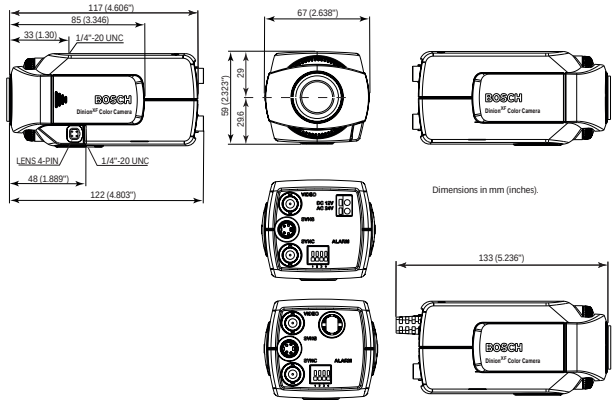
Parts Included

Qty	Components
1	LTC 0485 Series Dinion^{XF} Color Camera
1	Spare male 4 – pin lens connector

Certifications and Approvals

Electro Magnetic Compatibility	
Emission	EN55022 class B, FCC class B part 15
Immunity	EN50130-4 Alarm Systems, Part 4
Vibration	Camera with 500 gr (1.1 lbs) lens according to IEC60068-2-27
Safety	
EN60065 (/10 and /50 models)	
UL6500, cUL CAN/CSA E60065-00 (/20 and /60 models)	

Installation/Configuration Notes



Dimensions in mm (inches)

Technical Specifications			
Electrical			
Type no.	LTC 0485/11 LTC 0485/51	LTC 0485/21 LTC 0485/61	
CCD type	1/3-inch interline		
Active pixels	752 x 582 (PAL)	768x492 (NTSC)	
Sensitivity (Full video)*	2.4 lux		
Sensitivity 50 IRE*	0.59 lux / 0.24 lux (NightSense)		
Minimum Illumination	0.24 lux / 0.10 lux (NightSense)*		
Minimum Illumination with Sens up	0.024 lux / 0.010 lux (NightSense)		
Min. Resolution	540 TVL		
SNR	> 50 dB		
Video output	1 Vpp, 75 Ω		
Y/C output	Y: 1 Vpp / C: 0.3 Vpp		
Sync.	Internal, Line Lock, HV-lock and Genlock (Burst lock) selectable		
Shutter	Auto (1/60 (1/50) to 1/500000), Fixed, Flickerless, Default		
Sensitivity	Off, Automatic continuous up to 10x		
Auto Black	On, Off selectable		
Range	32x dynamic range enhancement		
Dynamic Noise Reduction	Auto, Off selectable		
Contour	Sharpness enhancement level selectable		
BLC	Off, Area and Level selectable		
Gain	Auto (maximum level selectable to 28 dB) or fixed level selectable		
Lens Mount	C/CS		
White balance	ATW (2500 - 10000 K), AWB hold, Manual WB selectable		
VMD	4 area, sensitivity selectable		
Alarm output	VMD or Bilinx		
Alarm Input (TTL)	Profile switching, +5 V nominal, +40 VDC max		
Alarm Output Relay	max. 30 VAC or +40 VDC, Max 0,5 A continuous, 10 VA		
External sync input	75 Ω or High Impedance selectable		
Cable compensation	Up to 1000 m (3000 ft) coax without external amplifiers (automatic set-up in combination with coaxial communication)		
Camera ID	16 character editable string, position selectable		
Lens types	Manual, DC and Video Iris auto-detect with override DC-IRIS drive: max 50 mA continuous Video iris: 11.5 ± 0.5 VDC, max 50 mA continuous		
Remote control	Bi-directional coaxial communication		
Power Consumption	4 W		
Power Supply	/11 and /21	12 - 28 VAC, 11 - 39 VDC	45 – 65 Hz
	/51 and /61	85 – 265 VAC	45 - 65 Hz

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Electrical	
Dimensions (H x W x L)	59 x 67 x 122 mm (2.28 x 2.6 x 4.8 inch) without lens
Weight	450 g (0.99 lbs) without lens
Tripod mount	Bottom (isolated) and top 1/4-inch 20 UNC
Controls	OSD with softkey operation

*F1.2, 89% scene reflectivity, SensUp Off

Environmental	
Operating Temperature	-20°C to +50°C(-4°F to +122°F)
Storage Temperature	-25°C to +70°C(-13°F to +158°F)
Ambient humidity	Operating: 20% to 93% RH, storage up to 98% RH

Ordering Information
Model & Description
LTC 0485/11 High Performance Color Camera Dinion^{XF}, 1/3-inch Color, PAL, low voltage
LTC 0485/21 High Performance Color Camera Dinion^{XF}, 1/3-inch Color, NTSC, low voltage
LTC 0485/51 High Performance Color Camera Dinion^{XF}, 1/3-inch Color, PAL, high voltage
LTC 0485/61 High Performance Color Camera Dinion^{XF}, 1/3-inch Color, NTSC, high voltage
Hardware Accessories
LTC 3364/21 Varifocal Lens 1/3-inch, 2.8 – 6 mm, DC-iris, CS-mount F/1.4 - 300, 4 pin
LTC 3364/31 Varifocal Lens 1/3-inch, 3.5 – 8 mm, DC-iris, CS-mount, F/1.4 - 300, 4 pin
LTC 3364/40 Varifocal Lens 1/3-inch, 2.8 – 12 mm, DC-iris, CS-mount, F/1.4 - 360, 4 pin
LTC 3374/20 Varifocal Lens 1/3-inch, 5 – 50 mm, DC-iris, CS-mount, F/1.4-185, 4-pin
LTC 3384/21 Zoom Lens 1/3-inch, 6 – 60 mm, DC-iris, CS-mount, F/1.4-360, 4-pin
TC120PS Power Transformer Power Supply Unit (120 VAC, 60 Hz/15 VDC, 9 VA)
TC220PS Power Transformer Power Supply Unit (220 - 240 VAC, 50/60 Hz/15 VDC, 9 VA)
TC220PSX-24 Power Transformer Power Supply Unit (220 –240 VAC, 50/60 Hz/24 VAC, 20 VA)
TC1334 Power Transformer Power Supply Unit (120 VAC, 60 Hz/24 VAC, 30 VA)
Software Options
VP-CFGSFT Configuration Software for cameras using Bilinx, includes VP-USB Adaptor

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LTC 0495 Series Dinion^{XF} Day\Night Cameras - 540 TVL

The LTC 0495 High Performance 1/3-inch Digital CCD Day/Night Camera ensures the highest image quality possible at any time. Depending on the available light the camera will automatically switch from color to monochrome.

A unique combination of 15-bit digital video processing that enhances sensitivity and XF-Dynamic which extends the dynamic range provides a sharper, more detailed image with outstanding accuracy in color reproduction.

All Dinion cameras are supplied ready to operate. Simply attach and focus the lens, then connect power. No tools are required for back focus and power connection. For especially challenging situations where fine tuning or special settings are required, the camera parameters can be individually set using the control buttons on the side of the camera and On-screen Display (OSD). The camera automatically detects the lens type. The Lens Wizard ensures accurate back-focusing for perfectly sharp pictures at all times.

Features

- 15-bit DSP Technology
- High sensitivity
- Mechanically switching IR filter for IR sensitivity at night
- XF-Dynamic for unsurpassed wide dynamic range
- Bilinx Communication for remote set-up and control
- Default Shutter eliminates motion blurring
- Four area video motion detection
- 540 TVL resolution

Functions

XF-Dynamic
The highly accurate 15-bit digital signal is automatically processed to optimally capture the detail in both the high and low light areas of the scene simultaneously, maximizing the information visible in the picture.

Bilinx Technology
Bilinx is a bi-directional communication capability embedded in the video signal of all Bosch Dinion cameras. Technicians can check status, change camera settings and even update firmware from virtually anywhere along the video cable. Bilinx reduces service and installation time, provides for more accurate set-up and adjustment, and improves overall performance. In addition, Bilinx uses the standard video cable to transmit alarm and status messages, providing superior performance without additional installation steps.

Video Motion Detection
The built-in video motion detector allows you to select up to four fully programmable areas with individual thresholds. The global scene change detector minimizes false alarms caused by sudden lighting condition changes, such as switching on or off the indoor or security lighting. When motion is detected alarms may be displayed in the video signal while the output relay can be closed in addition to alarm message transmission on Bilinx.

Auto Black
The automatic black level feature enhances contrast by compensating for reduced contrast (i.e. glare, fog, mist).

Default Shutter
The LTC 0495 features a fast, default shutter speed in sufficient lighting conditions to capture moving objects. When light levels fall and other adjustments have been exhausted, the shutter speed reverts to the standard setting to maintain sensitivity.

Back Light Compensation (BLC)
Offering a fully programmable BLC area of interest, and a variable BLC level, the camera can be easily set up for even the most challenging entrance applications.

Lens Wizard
The Lens Wizard automatically detects the lens type and helps focus the lens at the maximum opening to ensure proper focus is maintained throughout the 24-hour cyle. No special tools or filters are required.

Programmable Modes
Three independent, preprogrammed operating modes support typical applications, but are fully programmable for individual situations. Switching between modes is easy via Bilinx or the external alarm input.

Day/Night Mode
The Day/Night Mode LTC 0495 provides enhanced night viewing by increasing the IR sensitivity. The IR filter can switch from color to monochrome automatically by either sensing the illumination level or via the alarm input. The filter can be switched manually via the alarm input, through the camera menu or via the Bilinx coaxial control interface. An internal through the lens IR detector enhances the monochrome mode stability, as it prevents reverting to the color mode when IR illumination is dominant.

SensUp
By increasing the integration time on the CCD up to 10 times, the effective sensitivity is dramatically enhanced.
This is especially useful when relying only on moonlight for illumination.

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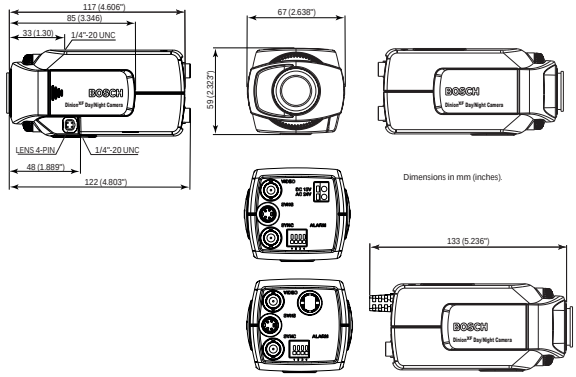
Parts Included

Quant.	Component
1	LTC 0495 Series Dinion^{XF}
1	C/CS – mount conversion ring
1	Spare male 4 – pin lens connector

Certifications and Approvals

Electro Magnetic Compatibility	
Emission	EN55022 class B, FCC class B part 15
Immunity	EN50130-4 Alarm Systems, Part 4
Vibration	Camera with 500 gr (1.1 lbs) lens according to IEC60068-2-27
Safety	
EN60065 (/11 and /51 models)	
UL6500, cUL CAN/CSA E60065-00 (/20 and /60 models)	

Installation/Configuration Notes



Dimensions in mm (inches)

Technical Specifications			
Electrical			
Type No.	LTC0495/11 LTC0495/51		LTC0495/21 LTC0495/61
CCD type	1/3-inch interline		
Active pixels	752 x 582 (PAL)		768x492 (NTSC)
Sensitivity (Full video)	2.4 lux*		
Sensitivity 50 IRE	0.59 lux / 0.08 lux (Monochrome mode)*		
Minimum illumination	0.24 lux / 0.038 lux (Monochrome mode)*		
Minimum Illumination with Sensup	0.024 lux / 0.0038 lux (Monochrome mode)		
Min. Resolution	540 TVL		
SNR	> 50 dB		
Video output	1 Vpp, 75 Ω		
Y/C output	Y: 1 Vpp / C: 0.3 Vpp		
Synchronization	Internal, Line Lock, HV-lock and Genlock (Burst lock) selectable		
Shutter	Auto (1/60 (1/50) to 1/500000), Fixed, Flickerless, Default		
Sensitivity up	Off, Automatic continuous up to 10x		
Auto Black	On, Off selectable		
Range	32x dynamic range enhancement		
Dynamic Noise Reduction	Auto, Off selectable		
Contour	Sharpness enhancement level selectable		
BLC	Off, Area and Level selectable		
Gain	Auto (maximum level selectable to 28 dB) or fixed level selectable		
Lens Mount	CS (max lens protrusion 5 mm, 0.2 inch)		
White balance	ATW (2500 - 10000 K), AWB hold, Manual WB selectable		
VMD	4 area, sensitivity selectable		
Alarm output	VMD or Bilinx		
Alarm Input (TTL)	Profile switching, +5 V nominal, +40 VDC max		
Alarm Output Relay	max. 30 VAC or +40 VDC, Max 0,5 A continuous, 10 VA		
External sync input	75 Ω or High Impedance selectable		
Cable compensation	Up to 1000 m (3000 ft) coax without external amplifiers (automatic set-up in combination with coaxial communication)		
Camera ID	16 character editable string, position selectable		
Lens types	Manual, DC and Video Iris auto-detect with override DC-IRIS drive: max 50 mA continuous Video iris: 11.5 ± 0.5 VDC, max 50 mA continuous		
Remote control	Bilinx coaxial communication		
Power Consumption	4 W		
Power Supply	/11, /21	12 - 28 VAC, 11 - 39 VDC	45 - 65 Hz
	/51, /61	110 - 240 VAC	45 - 65 Hz

BOSCH

Mechanical	
Dimensions (H x W x L)	59 x 67 x 122 mm (2.28 x 2.6 x 4.8 inch) without lens
Weight	450 g (0.99 lbs) without lens
Tripod mount	Bottom (isolated) and top 1/4-inch 20 UNC
Controls	OSD with softkey operation

Environmental	
Operating Temperature	-20°C to +50°C (-4°F to 122°F)
Storage Temperature	-25°C to +70°C (-13°F to +158°F)
Ambient humidity Operating	20% to 93% RH, storage up to 98% RH

Ordering Information
Model & Description
LTC 0495/11 Dinion^{XF} Day/Night Cameras Dinion^{XF}, 1/3-inch Day/Night, PAL, Low Voltage
LTC 0495/21 Dinion^{XF} Day/Night Cameras Dinion^{XF}, 1/3-inch Day/Night, NTSC, Low Voltage
LTC 0495/51 Dinion^{XF} Day/Night Cameras Dinion^{XF}, 1/3-inch Day/Night, PAL, High Voltage
LTC 0495/61 Dinion^{XF} Day/Night Cameras Dinion^{XF}, 1/3-inch Day/Night, NTSC, High Voltage
LTC 3364/40 Varifocal Lens 1/3-inch DC-IRIS, 2.8-11 mm F1.4-360 - IR
Hardware Accessories
LTC 3364/21 Varifocal Lens 1/3-inch, 2.8 – 6 mm, DC-iris, CS-mount F/1.4 - 300, 4 pin
LTC 3364/31 Varifocal Lens 1/3-inch, 3.5 – 8 mm, DC-iris, CS-mount, F/1.4 - 300, 4 pin
LTC 3384/21 Zoom Lens 1/3-inch, 6 – 60 mm, DC-iris, CS-mount, F/1.4-360, 4-pin
TC120PS Power Transformer Power Supply Unit (120 VAC, 60 Hz/15 VDC, 9 VA)
TC220PS Power Transformer Power Supply Unit (220 - 240 VAC, 50/60 Hz/15 VDC, 9 VA)
TC220PSX-24 Power Transformer Power Supply Unit (220 –240 VAC, 50/60 Hz/24 VAC, 20 VA)
TC1334 Power Transformer Power Supply Unit (120 VAC, 60 Hz/24 VAC, 30 VA)
Software Options
VP-CFGSFT Configuration Software for cameras using Bilinx, includes VP-USB Adaptor

BOSCH

LTC 0610 Series Dinion^{XF} Color Cameras - 540 TVL

The LTC 0610 Series of High Performance 1/2-inch Digital CCD Color Cameras create the best possible image, even under the most difficult light and scene conditions. Based on unique 15-bit digital video processing technology and employing XF-Dynamic, these cameras provide the ultimate sensitivity with extended dynamic range. By employing the best 1/2-inch CCD available, advanced front end processing, combined with the outstanding Dinion DSP, the cameras achieve an astonishing sensitivity, providing better color images in low light situations and sharper daytime images.

Intelligent White balance algorithms, supported by a White Balance Hold function and even full manual white balance, ensure the most accurate color reproduction possible.
All Dinion cameras are supplied ready to operate. Simply attach and focus the lens, and connect power to provide optimal pictures under virtually all scene conditions. No tools are required for back focus and power connection.

For extra challenging situations where fine tuning or special settings are required, the camera parameters can be individually set using the control buttons on the side of the camera and On-screen Display (OSD). Also, to aid installation, the camera automatically detects the lens type, and using the Lens Wizard ensures accurate (back) focusing for perfectly sharp pictures at all times.

Features

- 15-bit DSP technology
- XF-Dynamic
- Bilinx communication
- NightSense
- Default shutter
- Lens wizard
- Auto black
- Video motion detection
- 540 TVL resolution

Functions

XF-Dynamic

Extended dynamic range is brought to a new level on the LTC 0610 Series Camera by XF-Dynamic technology. XF-Dynamic automatically processes the highly accurate 15-bit digital signal to optimally capture the detail in both the highlight and lowlight areas of the scene simultaneously, to maximize the information visible in the picture.

Bilinx Technology

The LTC 0610 series cameras incorporate Bilinx. Bilinx is a bi-directional communication capability embedded in the video signal of all Bosch Dinion cameras. With Bilinx technicians can check status, change camera settings and even update firmware from virtually anywhere along the video cable. Bilinx reduces service and installation time, provides for more accurate setup and adjustment, and improves overall performance. In addition, Bilinx uses the standard video cable to transmit alarm and status messages, providing superior performance without additional installation steps.

Video Motion Detection

The built-in video motion detector allows you to select up to four fully programmable areas with individual thresholds.
The global scene change detector minimizes false alarms caused by sudden lighting condition changes, such as switching on or off the indoor or security lighting. When motion is detected alarms may be displayed in the video signal, the output relay can be closed in addition to alarm message transmission on Bilinx.

Auto Black

The automatic black level feature, enhances contrast by removing veiling glare from the picture or when contrast is reduced by fog or mist.

Default Shutter

When viewing moving objects a fast shutter speed is required. When using a fast shutter speed the lens opening or gain control needs to be increased to maintain the video signal.
The camera sensitivity is limited by the fast shutter speed. The default shutter setting of the LTC 0610 offers the best of all worlds, fast shutter speed as long as there is sufficient light, however as the light level falls, when other adjustments have been exhausted, the shutter reverts to the standard setting maintaining the cameras excellent sensitivity.

Back Light Compensation (BLC)

Offering a fully programmable BLC area of interest, and a variable BLC level, the camera can be easily set up for even the most challenging entrance applications.

Lens Wizard

The LTC 0610 series automatically detects the type of lens installed. The Lens Wizard will focus the lens at the maximum lens opening, to ensure that focus is maintained throughout the entire 24-hour day/night cycle.No special tools or filters are required.

Programmable Modes

The camera supports three independent operating modes. The 3 modes are preprogrammed for typical applications, but are fully programmable for individual situations. Switching between modes is easy via Bilinx or the external alarm input.

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NightSense

The LTC0610 cameras feature NightSense. With NightSense the sensitivity is increased by 9 dB in monochrome mode. NightSense can be automatically activated in low light situations, or remotely using Bilinx.

SensUp

By increasing the integration time on the CCD up to 10 times, the effective sensitivity is dramatically enhanced, especially useful where there is no artificial lighting and you rely on the moon, stars and scattered radiation.

Parts Included

Qty	Components
1	LTC 0610 Series Dinion^{XF} Color Camera
1	Spare male 4 – pin lens connector

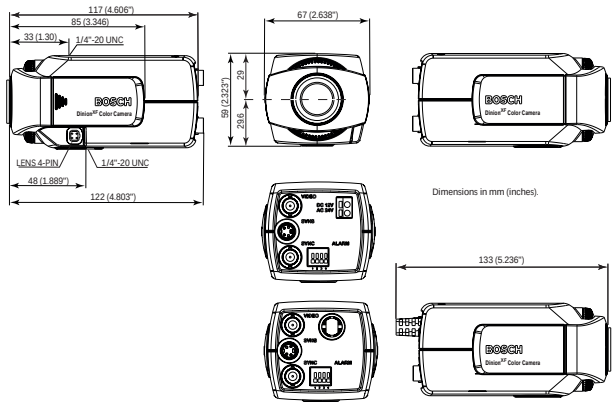
Certifications and Approvals

Electro Magnetic Compatibility	
Emission	EN55022 class B, FCC class B part 15
Immunity	EN50130-4 Alarm Systems, Part 4

Vibration	Camera with 500 gr (1.1 lbs) lens according to IEC60068-2-27

Safety
EN60065 (/11 and /51 models)
UL6500, cUL CAN/CSA E60065-00 (/21 and /61 models)

Installation/Configuration Notes



Dimensions in mm (inches)

Technical Specifications			
Electrical			
Type No.	LTC 0610/11 LTC 0610/51	LTC 0610/21 LTC 0610/61	
CCD type	1/2-inch interline		
Active pixels	752 x 582 (PAL)	768x492 (NTSC)	
Sensitivity (Full video)*	1.4lux		
Sensitivity 50 IRE*	0.35 lux / 0.14 lux (NightSense)		
Minimum Illumination*	0.18 lux / 0.08 lux (NightSense)		
Minimum Illumination with Sens Up	0.018 lux / 0.008 lux (NightSense)		
Minimum Resolution	540 TVL		
SNR	> 50dB		
Video output	1Vpp, 75Ω		
Y/C output	Y: 1Vpp / C: 0.3Vpp		
Sync.	Internal, Line Lock, HV-lock and Genlock (Burst lock) selectable		
Shutter	Auto (1/60 (1/50) to 1/500000), Fixed, Flickerless, Default		
NightSense	Auto, Forced, Off		
Sensitivity up	Off, Automatic continuous up to 10x		
Auto Black	On, Off selectable		
Dynamic Range	32x dynamic range enhancement		
Dynamic Noise Reduction	Auto, Off selectable		
Contour	Sharpness enhancement level selectable		
BLC	Off, Area and Level selectable		
Gain	Auto (maximum level selectable to 28dB) or fixed level selectable		
Lens Mount	C/CS		
White balance	ATW (2500 - 10000K), AWB hold, Manual WB selectable		
VMD	four area, sensitivity selectable		
Alarm output	VMD or Bilinx		
Alarm Input (TTL)	Profile switching, +5V nominal, +40VDC max		
Alarm Output Relay	max. 30VAC or +40VDC, Max 0,5A continuous, 10VA		
External sync input	75Ω or High Impedance selectable		
Cable compensation	Up to 1000m (3000ft) coax without external amplifiers (automatic setup in combination with coaxial communication)		
Camera ID	16 character editable string, position selectable		
Lens types	Manual, DC and Video Iris auto-detect with override DC-IRIS drive: max 50mA continuous Video iris: 11.5 ± 0.5VDC, max 50mA continuous		
Remote control	Bi-directional coaxial communication		
Power Consumption	4W		
Power Supply	/11 and /21	12 - 28 VAC, 11 - 39 VDC	45 - 65 Hz
	/51 and /61	85 - 265 VAC	45 - 65 Hz

BOSCH

Mechanical	
Dimensions (H x W x L)	59 x 67 x 122mm (2.28 x 2.6 x 4.8in) without lens
Weight	450g (0.99lbs) without lens
Tripod mount	Bottom (isolated) and top 1/4-inch 20 UNC
Controls	OSD with softkey operation

Environmental	
Operating Temperature	-20°C to +50°C (-4°F to +122°F)
Storage Temperature	-25°C to +70°C(-13°F to +158°F)
Ambient humidityOperating	20% to 93% RH, storage up to 98% RH

Ordering Information
Model & Description
LTC 0610/11 High Performance Color Camera Dinion^{XF}, 1/2-inch Color, PAL, low voltage
LTC 0610/21 High Performance Color Camera Dinion^{XF}, 1/2-inch Color, NTSC, low voltage
LTC 0610/51 High Performance Color Camera Dinion^{XF}, 1/2-inch Color, PAL, high voltage
LTC 0610/61 High Performance Color Camera Dinion^{XF}, 1/2-inch Color, NTSC, high voltage
Hardware Accessories
LTC 3264/30 Varifocal Lens 1/2-inch Varifocal lens 4.5 – 10 mm, DC-IRIS, CS-mount f/1.6 - 360, 4 pin
LTC 3274/41 Varifocal Lens 1/2-inch, 7.5 – 75 mm, DC-iris, F2.2-360
LTC 3283/20 Zoom Lens 1/2-inch, 8.0 – 48 mm, Video-IRIS, CS-mount f/1.4-360, 4-pin
TC120PS Power Transformer Power Supply Unit (120 VAC, 60 Hz/15 VDC, 9 VA)
TC220PS Power Transformer Power Supply Unit (220 - 240 VAC, 50/60 Hz/15 VDC, 9 VA)
TC220PSX-24 Power Transformer Power Supply Unit (220 –240 VAC, 50/60 Hz/24 VAC, 20 VA)
TC1334 Power Transformer Power Supply Unit (120 VAC, 60 Hz/24 VAC, 30 VA)
Software Options
VP-CFGSFT Configuration Software for cameras using Bilinx, includes VP-USB Adaptor

BOSCH

LTC 0620 Series Dinion^{XF} Day\Night Cameras - 540 TVL

The LTC 0620 High Performance 1/2-inch Digital CCD Day/Night Camera ensures the highest image quality possible at any time. Depending on the available light the camera will automatically switch from color to monochrome.

A unique combination of 15-bit digital video processing that enhances sensitivity and XF-Dynamic which extends the dynamic range provides a sharper, more detailed image with outstanding accuracy in color reproduction.

All Dinion cameras are supplied ready to operate. Simply attach and focus the lens, then connect power. No tools are required for back focus and power connection. For especially challenging situations where fine tuning or special settings are required, the camera parameters can be individually set using the control buttons on the side of the camera and On-screen Display (OSD). The camera automatically detects the lens type.
The Lens Wizard ensures accurate back-focusing for perfectly sharp pictures at all times.

Features

- 15-bit DSP Technology
- Superb sensitivity
- Mechanically switching IR filter for IR sensitivity at night
- XF-Dynamic for unsurpassed wide dynamic range
- Bilinx Communication for remote set-up and control
- Default Shutter eliminates motion blurring
- Four area video motion detection
- 540 TVL resolution

Functions

XF-Dynamic

The highly accurate 15-bit digital signal is automatically processed to optimally capture the detail in both the high and low light areas of the scene simultaneously, maximizing the information visible in the picture.

Bilinx Technology

Bilinx is a bi-directional communication capability embedded in the video signal of all Bosch Dinion cameras. Technicians can check status, change camera settings and even update firmware from virtually anywhere along the video cable. Bilinx reduces service and installation time, provides for more accurate set-up and adjustment, and improves overall performance. In addition, Bilinx uses the standard video cable to transmit alarm and status messages, providing superior performance without additional installation steps.

Video Motion Detection

The built-in video motion detector allows you to select up to four fully programmable areas with individual thresholds.
The global scene change detector minimizes false alarms caused by sudden lighting condition changes, such as switching on or off the indoor or security lighting. When motion is detected alarms may be displayed in the video signal while the output relay can be closed in addition to alarm message transmission on Bilinx.

Auto Black

The automatic black level feature enhances contrast by compensating for reduced contrast (i.e. glare, fog, mist).

Default Shutter

The LTC 0620 features a fast, default shutter speed in sufficient lighting conditions to capture moving objects. When light levels fall and other adjustments have been exhausted, the shutter speed reverts to the standard setting to maintain sensitivity.

Back Light Compensation (BLC)

Offering a fully programmable BLC area of interest, and a variable BLC level, the camera can be easily set up for even the most challenging entrance applications.

Lens Wizard

The Lens Wizard automatically detects the lens type and helps focus the lens at the maximum opening to ensure proper focus is maintained throughout the 24-hour cyle. No special tools or filters are required.

Programmable Modes

Three independent, preprogrammed operating modes support typical applications, but are fully programmable for individual situations. Switching between modes is easy via Bilinx or the external alarm input.

Day/Night Mode

The Day/Night Mode LTC 0620 provides enhanced night viewing by increasing the IR sensitivity. The IR filter can switch from color to monochrome automatically by either sensing the illumination level or via the alarm input. The filter can be switched manually via the alarm input, through the camera menu or via the Bilinx coaxial control interface. An internal through the lens IR detector enhances the monochrome mode stability, as it prevents reverting to the color mode when IR illumination is dominant.

SensUp

By increasing the integration time on the CCD up to 10 times, the effective sensitivity is dramatically enhanced. This is especially useful when relying only on moonlight for illumination.

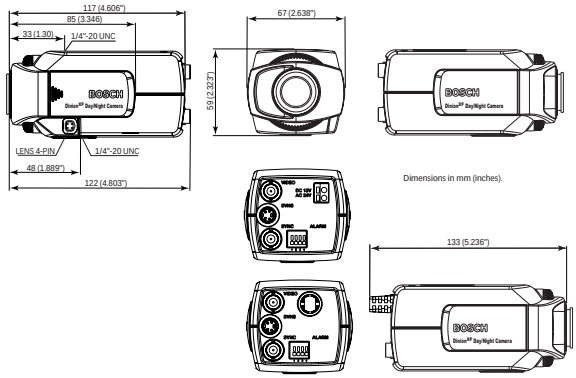
Parts Included

Quant.	Component
1	LTC 0620 Series Dinion^{XF}
1	C/CS – mount conversion ring
1	Spare male 4-pin lens connector

Certifications and Approvals

Electro Magnetic Compatibility	
Emission	EN55022 class B, FCC class B part 15
Immunity	EN50130-4 Alarm Systems, Part 4
Vibration	Camera with 500 gr (1.1 lbs) lens according to IEC60068-2-27
Safety	
EN60065 (/10 and /50 models)	
UL6500, cUL CAN/CSA E60065-00 (/20 and /60 models)	

Installation/Configuration Notes



Dimensions in mm (inches)

Technical Specifications			
Electrical			
Type No.	LTC0620/11 LTC0620/51	LTC0620/21 LTC0620/61	
CCD type	1/2-inch interline		
Active pixels	752 x 582 (PAL)	768x492 (NTSC)	
Sensitivity (Full video)	1.4 lux*		
Sensitivity 50 IRE	0.31 lux / 0.052 lux (Monochrome Mode)*		
Minimum illumination	0.18 lux / 0.024 lux (Monochrome Mode)*		
Minimum Illumination with sens up	0.018 lux / 0.0024 lux (Monochrome Mode)		
Min. Resolution	540 TVL		
SNR	> 50 dB		
Video output	1 Vpp, 75 Ω		
Y/C output	Y: 1 Vpp / C: 0.3 Vpp		
Sync.	Internal, Line Lock, HV-lock and Genlock (Burst lock) selectable		
Shutter	Auto (1/60 (1/50) to 1/500000), Fixed, Flickerless, Default		
Sensitivity up	Off, Automatic continuous up to 10x		
Auto Black	On, Off selectable		
Range	32x dynamic range enhancement		
Noise Reduction	Auto, Off selectable		
Contour	Sharpness enhancement level selectable		
BLC	Off, Area and Level selectable		
Gain	Auto (maximum level selectable to 28 dB) or fixed level selectable		
Lens Mount	CS (max lens protrusion 5 mm, 0.2 inch)		
White balance	ATW (2500 - 10000 K), AWB hold, Manual WB selectable		
VMD	4 area, sensitivity selectable		
Alarm output	VMD or Bilinx		
Alarm Input (TTL)	Profile switching, +5 V nominal, +40 VDC max		
Alarm Output Relay	max. 30 VAC or +40 VDC, Max 0,5 A continuous, 10 VA		
External sync input	75 Ω or High Impedance selectable		
Cable compensation	Up to 1000 m (3000 ft) coax without external amplifiers (automatic set-up in combination with coaxial communication)		
Camera ID	16 character editable string, position selectable		
Lens types	Manual, DC and Video Iris auto-detect with override DC-IRIS drive: max 50 mA continuous Video iris: 11.5 ± 0.5 VDC, max 50 mA continuous		
Remote control	Bilinx Coaxial Communication		
Power Consumption	4 W		
Power Supply	/10 and /20	12 - 28 VAC, 11 - 39 VDC	45 - 65 Hz
	/50 and /60	85 – 265 VAC	45 - 65 Hz

BOSCH

Mechanical	
Dimensions (H x W x L)	59 x 67 x 122 mm (2.28 x 2.6 x 4.8 inch) without lens
Weight	450 g (0.99 lbs) without lens
Tripod mount	Bottom (isolated) and top 1/4-inch 20 UNC
Controls	OSD with softkey operation

Environmental	
Operating Temperature	-20°C to +50°C(-4°F to +122°F)
Storage Temperature	-25°C to +70 °C(-13°F to +158°F)
Ambient humidity Operating	20% to 93% RH, storage up to 98% RH

Ordering Information	
Model & Description	
LTC 0620/11 Dinion^{XF} Day/Night Cameras	Dinion^{XF}, 1/2-inch Day/Night, PAL, Low Voltage
LTC 0620/21 Dinion^{XF} Day/Night Cameras	Dinion^{XF}, 1/2-inch Day/Night, NTSC, Low Voltage
LTC 0620/51 Dinion^{XF} Day/Night Cameras	Dinion^{XF}, 1/2-inch Day/Night, PAL, High Voltage
LTC 0620/61 Dinion^{XF} Day/Night Cameras	Dinion^{XF}, 1/2-inch Day/Night, NTSC, High Voltage
Hardware Accessories	
LTC 3264/30 Varifocal Lens	1/2-inch Varifocal lens 4.5 – 10 mm, DC-IRIS, CS-mount f/1.6 - 360, 4 pin
LTC 3274/41 Varifocal Lens	1/2-inch, 7.5 – 75 mm, DC-iris, F2.2-360
LTC 3283/20 Zoom Lens	1/2-inch, 8.0 – 48 mm, Video-IRIS, CS-mount f/1.4-360, 4-pin
TC120PS Power Transformer	Power Supply Unit (120 VAC, 60 Hz/15 VDC, 9 VA)
TC220PS Power Transformer	Power Supply Unit (220 - 240 VAC, 50/60 Hz/15 VDC, 9 VA)
TC220PSX-24 Power Transformer	Power Supply Unit (220 –240 VAC, 50/60 Hz/24 VAC, 20 VA)
TC1334 Power Transformer	Power Supply Unit (120 VAC, 60 Hz/24 VAC, 30 VA)
Software Options	
VP-CFGSFT Configuration Software	for cameras using Bilinx, includes VP-USB Adaptor

BOSCH

V118xP Bullet Cameras

The V1180P and V1182P provide a wide range of features. These small, sleek, rugged cameras can be easily installed in almost any architectural design and provide the ultimate in anti-vandalism protection with their diecast aluminum housings. The V1180P and V1182P are even submersible in water to a depth of 3 m.

These cameras provide a variety of features that make choosing the best camera for a particular application easy and affordable.

The Black & White fixed focus (3.6-mm) camera (V1180P) delivers 380 TV lines of horizontal resolution with a signal-to-noise ratio greater than 50 dB at light levels as low as 0.03 Lux.

The color fixed focus camera (V1182P) provides 330 TV lines of horizontal resolution with a signal-to-noise ratio greater than 46 dB at light levels as low as 0.3 Lux through its 3.6-mm lens.

Features

- Choice of color or black & white camera
- Rugged die-cast aluminum housing
- Mounting bracket supplied
- Resistant to vandalism
- Easy to install

Ordering Information	
Model & Description	
V1180P Bullet Camera	
1/3-inch b/w bullet cam. 3.6 mm	
V1182P Bullet Camera	
1/3-inch color bullet cam. 3.6 mm pal	

Technical Specifications	
Electrical – V1180p	
Power	
Input Voltage	12 VDC
Input Current	<160 mA
Video	
Pick-up Device	B&W 1/3-inch CCD, CCD Area Sensor; 512 (H) x 582 (V)
SYNC System	Internal
Output	1.0 to 1.1 Vpp CCIR Composite
Minimum Illumination	0.03 Lux
Gamma	0.45
Backlight Compensation	On
Lens & Iris	
lens	3.6 mm monofocal
Auto iris	CCD shutter iris
Iris Speed	1/50–1/50000 s.
S/N Ratio	>50 dB
Resolution	>380 TV Lines
Submersible depth	3 meter
Mechanical	
Housing Dimensions (H x Dia.)	57 x 19 mm (2.24x0.75 inch)
Environmental	
Ambient Temperature	-10°C to +50°C
Electrical – V1182p	
Power	
Input Voltage	12 VDC
Input Current	<120 mA
Video	
Pick-up Device	Color 1/3-inch CCD, Interline Transfer; 512 (H) x 582 (V)
SYNC System	Internal
Output	1 Vpp PAL Composite
Minimum Illumination	0.3 Lux (F1.2 10 IRE)
Gamma	0.45
Backlight Compensation	On
Lens & Iris	
lens	3.6 mm monofocal
Auto iris	CCD shutter iris
Iris Speed	1/50–1/100000 s.
S/N Ratio	>46 dB
Resolution	>330 TVL
Submersible depth	3 meter
Mechanical	
Housing Dimensions (H x Dia.)	71 x 21 mm (2.8 x 0.83 inch)
Environmental	
Ambient Temperature	-10°C to +50°C

BOSCH